

WHAT IS CLAIMED IS:

1. A manufacturing method of a bonded wafer, in which said bonded wafer is manufactured by bonding a wafer for active layer wafer with a supporting wafer, wherein

said active layer wafer and said supporting wafer, which are to be bonded together, have fitting surfaces, respectively, for fitting to each other, each of said fitting surfaces comprising a part of a spherical surface having the same curvature.

2. A manufacturing method of a bonded wafer in accordance with claim 1, in which at least either one of said fitting surface of said active layer wafer and said fitting surface of said supporting wafer includes a hetero structure along a thickness-wise direction.

3. A manufacturing method of a bonded wafer in accordance with claim 1 or 2, in which said hetero structure is provided along the thickness-wise direction in the epitaxial growth method.

4. A manufacturing method of a bonded wafer in accordance with claim 1, in which at least either one of said fitting surface of said active layer wafer and said fitting surface of said supporting wafer includes an insulating film along a thickness-wise direction.

5. A manufacturing method of a bonded wafer in accordance with any one of claim 1 to 4, in which said hetero structure or said insulating film is disposed in a top and a back surfaces, respectively, of said active layer wafer or said supporting wafer, and said hetero structure or said oxide film in said top and the back surfaces are different in thickness from each other.

6. A manufacture method of a bonded wafer in accordance with any one of claim 1 to 5, comprising the steps of

ion-implanting of hydrogen gas or noble gas into said active layer wafer to form an ion-implanted layer in said active layer wafer;

subsequently bonding said active layer wafer with said supporting wafer to form said bonded wafer; and then

heat treating said bonded wafer by holding it at a predetermined temperature so as to induce a cleavage and separation at the site of ion-implanted layer as an interface.

7. A bonded wafer manufactured by bonding an active layer wafer with a supporting wafer, in which

said active layer wafer and said supporting wafer, which are to be bonded together, have fitting surfaces, respectively, for fitting to each other, each of said fitting surfaces comprising a part of a spherical surface having the same curvature.